

Publication List

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PAPERS IN REFEREED JOURNALS

• Submitted for publication

1. Wu, X. and Y. Nie (2010) Modeling heterogeneous risk-taking behavior in route choice: a stochastic dominance approach. 19th International Symposium on Transportation and Traffic Theory, under review.
2. Nie, Y. and Y. Liu (2010) Pareto-improving pricing-refunding schemes in general bimodal transportation networks with heterogeneous users. 19th International Symposium on Transportation and Traffic Theory, under review.
3. J. Ma., Y. Nie and H. M. Zhang (2010) Solving the integrated corridor control problem using simultaneous perturbation stochastic approximation. IEEE Transaction on Intelligent Transportation Systems, under review.
4. Y. Liu. and Y. Nie (2010) Morning Commute Problem Considering Route Choice, User Heterogeneity and Multi-Criteria System Optimum. Transportation Research Part B, under revision.
5. Nie, Y., X. Wu, P. Nelson and J. Dillenburg (2010) Providing reliable route guidance: a case study using Chicago data. Transportation Research Part A, under review.
6. Nie, Y., X. Wu and T. Homem-de-Melo. (2010) Optimal path problems with secondorder stochastic dominance constraints. Networks and Spatial Economics, under review.
7. Nie, Y. (2007) A note on Bar-Gera's algorithm for the origin-based traffic assignment problem. Transportation Science, under review.

• Accepted for publication

1. Nie, Y. (2010) A cell-based Merchant-Nemhauser model for the system optimum dynamic traffic assignment problem. Transportation Research Part B, in press.

• Published or on-line first

1. S. Lu and Y. Nie (2010) Stability of user-equilibrium route flow solutions for the traffic assignment Problem. Transportation Research Part B, 44, 609 - 617.

2. Nie, Y. and Y. Liu. (2010) Existence of self-financing and Pareto-improving congestion pricing: impact of value of time distribution. *Transportation Research Part A*, 44, 39 - 51.
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3. Nie, Y. and H. M. Zhang. (2010) Solving the dynamic user optimal assignment problem considering queue spillback. *Networks and Spatial Economics*, 10, 49 - 71.
4. Nie, Y. and H. M. Zhang. (2010) A one-level O-D estimation approach based on relaxation. *Networks and Spatial Economics*, 10, 147 - 172.
5. Nie, Y. (2010) A class of bush-based algorithms for the traffic assignment problem. *Transportation Research Part B*, 44, 73-89.
6. Nie, Y. (2010) Equilibrium analysis of macroscopic traffic oscillations. *Transportation Research Part B*, 44, 62-72.
7. Zhang, H.M., J. Ma and Y. Nie (2009) A local synchronization control scheme for congested interchange areas in a freeway corridor. *Journal of the Transportation Research Board* , 2128, pp 173-183.
8. X.Wu and Y. Nie (2009) Implementation issues in approximate algorithms for reliable a priori shortest path problem. *Journal of the Transportation Research Board* , 2091, pp. 51-60.
9. Nie, Y. and X. Wu. (2009) Reliable a priori shortest path problem with limited spatial and temporal dependencies. *Proceedings of the 18th International Symposium on Transportation and Traffic Theory*, pp 169 - 196.
10. Nie, Y. and X. Wu. (2009) Shortest path problem considering on-time arrival probability. *Transportation Research Part B*, 43, 597-613.
11. Nie, Y. and H. M. Zhang. (2009) Numerical solution procedures for the morning commute problem. *Journal of Mathematical and Computer Modeling*, 49, pp. 1295-1310.
12. Nie, Y. and H. M. Zhang (2008) Oscillatory traffic flow patterns induced by queue spillback in a simple road network. *Transportation Science*, 42 (2), pp. 236-248.
13. Zhang, H. M., Y. Nie and Z. Qian (2008) Estimating time-dependent freeway O-D demands with different data coverage: a sensitivity analysis. *Journal of the Transportation Research Board*, 2047, pp. 91-99.
14. Nie, Y. and H. M. Zhang. (2008) A variational inequality approach for inferring dynamic origin-destination travel demands. *Transportation Research Part B*, 42, pp.635-662.
15. Nie, Y., Jingtao Ma and H. M. Zhang. (2007) A polymorphic dynamic network loading model. *Computer-Aided Civil and Infrastructure Engineering*, 23 (2), 86 - 103.

16. Shen, W., Y. Nie, and H. M. Zhang. (2007) A dynamic network simplex method for designing emergency evacuation plans. *Journal of the Transportation Research Board*, 2022, 83-93.
17. Bai, S., Y. Nie, and D. Niemeier. (2007) The impact of speed post-processing methods on regional mobile emissions estimation. *Transportation Research Part D*, 12, 307-324.
18. Shen, W., Y. Nie and H. M. Zhang. (2007) On path marginal cost analysis and its relation to dynamic system-optimal traffic assignment. *Proceedings of the 17th International Symposium on Transportation and Traffic Theory*, pp 319 - 351.
19. Nie, Y. and Y. Y. Fan. (2006) The arriving on time problem: a discrete algorithm that ensures convergence. *Journal of the Transportation Research Board* 1964, pp. 193 - 200.
20. Fan, Y. Y. and Y. Nie. (2006) Revisiting the arriving on time problem. *Networks and Spatial Economics*, 6, pp. 333-344. 4 of 9
21. Nie, Y., H. M. Zhang and W. W. Recker. (2005) Inferring origin-destination trip matrices with a decoupled GLS path flow estimator. *Transportation Research Part B*, 39, pp. 497 - 518.
22. Nie, Y., H. M. Zhang and D.-H. Lee. (2004) Models and algorithms for the traffic assignment problem with link capacity constraints. *Transportation Research Part B*, 38, pp.285 - 312.
23. Lee, D.-H., Y. Nie and A. Chen. (2003) A conjugate gradient projection algorithm for the traffic assignment problem. *Mathematical and Computer Modeling* 37, pp. 863 - 878.
24. Lee, D.-H., Y. Nie, A. Chen and Y. C. Leow. (2002) Link and path based traffic assignment algorithms: a computational and statistical study. *Journal of the Transportation Research Board* 1783, pp. 80 - 88.
25. Nie, Y. and Lee, D.-H. (2002) An uncoupled method for the equilibrium-based linear path flow estimator for origin-destination trip matrices. *Journal of the Transportation Research Board* 1783, pp. 72 - 79.
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1. Hillel Bar-Gera, Y. Nie, David Boyce, Yucong Hu and Yang Liu. Consistent Route Flows and the Condition of Proportionality. In the Proceedings of the 89th Annual Meeting of Transportation Research Board.
2. Nie, Y., X. Wu, P. Nelson and J. Dillenburg (2010) Providing reliable route guidance: a case study using Chicago data. In the Proceedings of the 89th Annual Meeting of Transportation Research Board.
3. Nie, Y. (2010) A cell-based Merchant-Nemhauser model for the system optimum dynamic traffic assignment problem. In the Proceedings of the 89th Annual Meeting of Transportation Research Board.
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8. Nie, Y. and H. M. Zhang (2008) Solution methods for the dynamic off-line relaxationbased O-D estimation problem. In the Proceedings of the 87th Annual Meeting of Transportation Research Board (CD-ROM).
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10. Nie, Y. (2008) Improved origin-based quasi-Newton method for the traffic assignment problem. In the Proceedings of the 87th Annual Meeting of Transportation Research Board (CD-ROM).
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13. Ma J., Y. Nie, and H. M. Zhang. (2006) Solving the integrated corridor control problem using simultaneous perturbation stochastic approximation. In the Proceedings of the 85th Annual Meeting of Transportation Research Board (CD-ROM).
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15. Zhang, H. M. and Y. Nie. (2005) Modeling network flow with and without link interaction: properties and implications. In the Proceedings of the 84th Annual Meeting of Transportation Research Board (CD-ROM).
16. Bai, S., Y. Nie, and D. Niemeier. (2005) The impact of speed post-processing methods on regional mobile emissions estimation. In the Proceedings of the 84th Annual Meeting of Transportation Research Board (CD-ROM).
17. Fan, Y. Y., Y. Nie, and A. Chen. (2004) Finding the best routing strategies for on-time arrival in stochastic networks. In Proceedings of the Second International Symposium on Transportation Networks, New Zealand, August 2004, pp. 260 - 266.
18. Nie, Y., X. Nie and H. M. Zhang. (2004) The relative performance of time-dependent shortest path algorithms: a network expansion perspective. In Proceedings of the 8th International Conference on Applications of Advanced Technologies in Transportation, Beijing, April 2004, pp. 66 - 71.
19. Nie, Y., H.M. Zhang, and R. R. Recker. (2003) A decoupled GLS-based path flow estimator for inferring origin-destination matrices. In the Proceedings of the 82th Annual Meeting of Transportation Research Board (CD-ROM).
20. Nie, Y. and D.-H. Lee (2002) An uncoupled method for the equilibrium-based linear path flow estimator for origin-destination trip matrices. In the Proceedings of the 81th Annual Meeting of Transportation Research Board (CD-ROM).
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22. Lee, D.-H., Y. Nie and A. Chen. (2000) A conjugate gradient projection algorithm for the traffic assignment problem. In the Proceedings of the 80th Annual Meeting of Transportation Research Board (CD-ROM).

23. Chen, A., D.-H. Lee, and Y. Nie. (2000) Path and link based traffic assignment algorithms: a comprehensive computational study. In Proceedings of the 6th ASCE International Conference on Application of Advanced Technologies in Transportation Engineering, Singapore, June 2000.

OTHER PUBLICATIONS

- Technical reports

1. David Boyce, Y. Nie, Hillel Bar-Gera, Yang Liu and Yucong Hu (2010) Field Test of a Method for Finding Consistent Route Flows and Multiple-Class Link Flows in Road Traffic Assignments. Federal Highway Administration.
2. Nie, Y., X.Wu, P. Nelson and J. Dillenburg (2009) Providing Reliable Route Guidance using Chicago Data, Technical Report #2009-001, prepared for Center for the Commercialization of the Innovative Transportation Technology.
3. Zhang, H.M., Wei Shen, Yu Nie, Jingtao Ma. California PATH Research Project (Task Order 5300) Final Report “Integrated Construction Zone Traffic Management”, UCBITS-PRR-2008-9.
4. Zhang, H.M., Yu Nie, Wei Shen, Ming S. Lee, Sarawut Jansuwan, Piya Chootinan, Surachet Pravinongvuth, Anthony Chen, Will W. Recker. California PATH Research Project (Task Order 5502) Final Report “Development of a Path Flow Estimator for Inferring Steady-State and Time-Dependent Origin-Destination Trip Matrices”, UCBITS-PRR-2008-10.

- Working papers

1. Nie, Y. (2006) A programmer’s manual for the toolkit of network modeling (TNM). University of California, Davis.
2. Nie, Y. (2003) Speed Post Processors for Air Quality Models. University of California, Davis.
3. Lee, D.-H. and Y. Nie. (2001) Choosing the shortest path algorithms right – a computational study. National University of Singapore, Singapore.